

REMARKS

In response to the Office Action mailed February 22, 2005, Applicants respectfully request reconsideration. To further the prosecution of this Application, Applicants have amended the claims, cancelled claims, added new claims, and also submit the remarks below.

Claims 1-22 were pending in this Application. By this amendment, claims 4-5, 13-14 and 21 have been cancelled. Applicants expressly reserve the right to prosecute the canceled claims and similar claims in a subsequent application. Claims 23-26 have been added. Accordingly, claims 1-3, 6-12, 15-20, and 22-26 are now pending in this Application. Of these, claims 1, 10, 19, and 22 are independent claims.

Rejections under §102 and §103

Claims 1-4, 6-13, 15-22 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,816,968 of Walmsley ("Walmsley"). Claims 5 and 14 were rejected under 35 U.S.C. §103(a) as being obvious in view of Walmsley.

Independent claim 1 has been amended to incorporate dependent claims 4 and 5, which have been cancelled, and thus claim 1 as amended is identical to original claim 5. Similar amendments have been made to the other independent claims. Thus, it is respectfully submitted that the rejection of claims 1-4, 6-13, and 15-22 under 35 U.S.C. § 102 is no longer applicable.

With respect to the rejection of claims 5 and 14 under 35 U.S.C. § 103(a), which presumably is now applicable to independent claims 1, 10, 19 and 22 due to their incorporation of the subject matter of claims 5 and 14, it is respectfully submitted that Walmsley does not render these claim obvious under 35 U.S.C. § 103(a) for the reasons set forth below.

To establish a *prima facie* case of obviousness, the Office Action must meet three criteria.

"First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations."

In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Walmsley fails to teach or suggest a method having all the features of claim 1 as amended. Specifically, Walmsley does not teach or suggest a method which includes forming a second serial number from a second module and outputting either a serial number valid signal or a serial number invalid signal depending on whether the module serial number of the vendor data (of the first module) matches the second serial number of the second module, as set forth in particularity in claim 1 as amended.

This feature of claim 1 may be used in identifying clone modules manufactured by unapproved vendors who have copied the data from a single "authentic" module (i.e., a module from an approved vendor). In this case, each clone module will be seen by the computerized device as coming from an approved vendor if only the result of the magic code comparison is examined. However, when the serial numbers from multiple clone modules are compared and found to be identical (which is never the case for modules from approved vendors), the clone modules can be identified as coming from unapproved vendors.

The Office Action explicitly acknowledges that "Walmsley fails to disclose the specific method of outputting a valid/invalid signal based on whether two authentication chips have matching serial numbers," but concludes that such a function would be obvious "as an extra element of security in the system." It is

respectfully urged that this conclusion lacks any factual support in Walmsley and therefore cannot serve as an adequate legal basis for rejecting claim 1.

Walmsley is concerned with the problem of authenticating so-called "consumables", such as printer toner cartridges and camera film (cols. 79-80). Walmsley does not show any system employing two or more consumables of the same type. Thus Walmsley has no opportunity to compare the serial number from one consumable in the system to another consumable in the system to determine whether they are duplicates. Furthermore, Walmsley does not teach or suggest any function of comparing the serial number from the consumable in one system with the serial number from a consumable of another system. Thus, it is not seen how Walmsley can possibly teach or suggest outputting a serial number valid signal or a serial number invalid signal depending on whether a module serial number of vendor data of a first module matches a second serial number of a second module, as set forth in claim 1. Walmsley does not even show two similar consumables in a single system or in separate systems, let alone suggest that it would be fruitful to compare the serial numbers from such consumables.

Although the Office Action refers to columns 55 and 25 of Walmsley in support of this rejection, the cited passages are not seen to amount to a teaching or suggestion of the serial-number-comparing function of claim 1. Column 55 is concerned with the problem of thwarting an attacker by making part of the memory vector *M* unique to each authentication chip (e.g., by incorporating a chip-specific serial number). By doing so, whatever information an attacker might glean from repeated interrogations of one authentication chip will be of limited or no use in successfully cloning the authentication chip. As described at lines 51-53, the attacks require the attacker to actually update *M* in the authentication chip and then observe subsequent outputs from the chip. By making part of *M* different in each authentication chip, the attacker's ability to correctly choose *M* is greatly reduced.

Thus, Walmsley merely teaches that an attacker's actions can be thwarted by including serial numbers or other device-specific information in the memory vector from which the encrypted output from the authentication chip is generated. There is no teaching or suggestion of comparing the serial numbers from different authentication chips, for the purposes of detecting clones nor for any other purpose.

For the reasons stated above, it is respectfully submitted that claim 1 patentably distinguishes over the cited prior art, and the rejection under 35 U.S.C. §103 should accordingly be withdrawn.

The remaining claims incorporate, either directly or indirectly, the above-discussed features of claim 1 and therefore are believed to be allowable over Walmsley for at least the same reasons discussed above.

Newly Added Claims

Dependent claims 23-26 have been added and are believed to be allowable in view of Walmsley and the other art of record. These claims specify three operations that are performed in order, namely error-checking, magic code verification, and serial number verification, and wherein each must be performed successfully before the next is performed. Support for these claims is provided within the Specification, for example in Figures 2 and 4-6 and related text. No new matter has been added. Neither Walmsley nor the other art of record is seen to teach or suggest the subject matter of these claims.

Conclusion

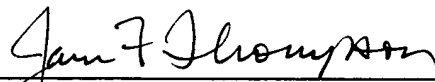
In view of the above amendments and remarks, this application is believed to be in condition for allowance. A notice to this affect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is respectfully requested to call the Applicants' representative at the number below.

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Applicants hereby petition for any extension of time which is required to maintain the pendency of this case. If there is a fee occasioned by this amendment, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50-0901.

If the enclosed papers or fees are considered incomplete, the Patent Office is respectfully requested to contact the undersigned collect at (508) 366-9600, in Westborough, Massachusetts.

Respectfully submitted,



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